Concussions in children and adolescents: What every parent should know

In 2004, the Centers for Disease Control estimated that more than 400,000 children and adolescents were treated in emergency rooms for sports- and activity-related concussions. Concussions are caused by mechanical forces to the head or face resulting in physiological changes in the brain. You don't have to be "knocked out" to have a concussion. In fact, fewer than 10 percent of concussions result in loss of consciousness.

Since less than 50 percent of high school athletes report their concussions to their athletic trainers, coaches or parents, it's important for parents to be aware of the symptoms of a concussion to seek appropriate medical care.

Symptoms of a concussion

Most concussion symptoms are temporary, lasting less than a week. However, if an athlete has sustained a significant concussion or multiple concussions, one or more of the following symptoms can persist for weeks to months:

- Headache (most common symptom)
- Nausea or vomiting
- Dizziness
- Sensitivity to light or noise
- Balance problems
- Fatigue
- Irritability
- Sadness
- Difficulty concentrating or remembering
- Feeling "foggy"
- Sleeping more or less than usual
- Feeling more emotional

Dangers of a concussion

Missing time from school and sports are the most immediate consequence of a concussion. If recognized and treated properly, most children and adolescents will recover fully from a single concussion. However, kids who sustain multiple concussions over a young sports career tend to take longer to recover each time and are more likely to experience prolonged post-concussion symptoms or cognitive impairment.

If recognized and treated early, kids can recover fully from a single concussion.

When concussions require immediate attention

If your child or adolescent experiences one ore more of the following symptoms, they need to be seen immediately in the emergency department:

- Prolonged nausea and vomiting
- Sudden vision changes
- Worsening headaches
- Abrupt change in personality
- Sudden loss of consciousness or inability to arouse
- Any rapidly worsening symptoms

An athlete with a suspected concussion should be immediately removed from play, and no athlete should be allowed to return to play if any symptoms of a concussion are noticed or suspected.

Neurocognitive testing is currently being conducted at the Nationwide Children's Hospital Sports Medicine and Orthopedic Center in Westerville. A neurocognitive test evaluates memory, brain processing speed and reaction time. Currently being used in the NFL, NHL, MLS, collegiate and area high school athletic programs, a neurocognitive test will never replace a thorough clinical exam by an experienced clinician. But it can be a valuable tool in safely returning an athlete to participation.

The Sports Concussion Program at Nationwide Children's Hospital utilizes the expertise of pediatric sports medicine specialists, along with neurologists, neurosurgeons, radiologists and neuropsychologists to best manage pediatric concussions. For more information, visit www.NationwideChildrens.org/Sports Medicine.

Story provided by Nationwide Children's Hospital.